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polarization. For example, the output grid polarizer 112 allows a signal with an output polarization to pass, while reflecting any signal with an input polarization. The input polarizer 110 allows a signal with an input polarization to pass, while reflecting any signal with an output polarization. The distance of the polarizers from the amplifier can be adjusted, allowing the polarizers to function as input and output tuners for the amplifier, with the polarizers providing the maximum benefit at a specific distance from the amplifier.

Claims

Please cancel claims 1-3.

Replace the corresponding claims in the original application with the following amended claims:

24. A rectangular waveguide for shifting the phase of a signal transmitted through the waveguide, comprising:

a waveguide comprising a top wall, a bottom wall and two sidewalls; and

at least one pair of opposing impedance wall structures, with one of said at least one pair being on said top wall and bottom wall, or said sidewalls, or both, each of said wall structures presenting an alterable surface impedance to transmitted signals of said waveguide, each of said wall structures presenting a high impedance to a resonant frequency signal transmitted by said waveguide, said surface impedance being alterable to cause the phase of said resonant frequency signal to change, wherein each of said impedance wall structures comprises:

a substrate of dielectric material having two sides;

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a conductive layer on one side of said dielectric material;

a plurality of mutually spaced conductive strips on the other side of said dielectric material, said strips separated by gaps and positioned parallel to said waveguide's longitudinal axis; and

a plurality of conductive vias extending through said dielectric material between said conductive layer and said conductive strips; and

a means for altering said impedance presented to said transmitted signals of said waveguide.

31. A rectangular waveguide for shifting the phase of a signal transmitted through the waveguide, comprising:

a waveguide comprising a top wall, a bottom wall and two sidewalls; and

at least one pair of opposing impedance wall structures, with one of said at least one pair being on said top wall and bottom wall, or said sidewalls, or both, each of said wall structures presenting an alterable surface impedance to transmitted signals of said waveguide, each of said wall structures presenting a high impedance to a resonant frequency signal transmitted by said waveguide, said surface impedance being alterable to cause the phase of said resonant frequency signal to change, wherein said wall structures present high impedance resonant L-C circuits to said resonant frequency, said impedance being altered to present a primarily inductive impedance to said resonant frequency.

REMARKS

Drawings

The examiner objected to the drawings because the